

### REMARKS

The Office Action mailed January 15, 2004 has been received and the Examiner's comments carefully reviewed. Claims 61, 65, and 69-71 have been amended. Claims 73-76 have been added. No new subject matter has been added. Claims 1, 36-47, 49, 50 and 53-76 are currently pending. Applicants respectfully submit that the pending claims are in condition for allowance.

### Rejections Under 35 U.S.C. §112

The Examiner rejected claims 63-72 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

In particular, the Examiner stated that claim 63 is ambiguous and has inquired as to what a traverse member is. "Traverse" is defined as follows:

Main Entry: <sup>3</sup>tra·verse ◀▶▶

Pronunciation: 'tra-(")v&rs, tr&-', tra-'

Function: *adjective*

: **lying across** : TRANSVERSE

See: <http://www.m-w.com/cgi-bin/dictionary> and Webster's Ninth New Collegiate Dictionary

This definition is not contrary to the disclosure. The first and second traverse members are positioned at ends of the central support member and, for example, lie across or cross the central support member. Moreover, on page 13, lines 11-13, the specification recites and describes first and second transverse members. The word "TRANSVERSE" in the above definition is noted in the dictionary as a synonymous cross-reference.

In light of this clarification, Applicants respectfully request withdrawal of this rejection.

### **Specification Objections**

The Examiner objected to the specification for failing to provide proper antecedent basis for the claimed subject matter. Applicants respectfully traverse this objection.

Support for the term "traverse" is found on page 13, lines 11-13. In particular, the specification recites a "first transverse member 1" and a "second transverse member 2". Although the term "traverse" is not specifically recited, there is no such *in haec verba* requirement. That is, "the subject matter of the claim need not be described literally (i.e., using the same terms, or *in haec verba*) in order for the disclosure to satisfy the description requirement." MPEP 2163.02. Only if the terminology is a departure from, an addition to, or a deletion from the disclosure should the Examiner conclude that the subject matter is not described. MPEP 2163.02. Given the clear definition of the term "traverse," which includes a synonymous cross-reference to "TRANSVERSE" (see above), the term "traverse member" is not a departure from, addition to, or deletion from the disclosed term "transverse member." Accordingly, Applicants respectfully request withdrawal of this objection.

### **Rejections Under 35 U.S.C. §102**

I. The Examiner rejected claims 63-72 under 35 U.S.C. §102(b) as being anticipated by Kohrs (U.S. Patent 5,609,636). Applicants respectfully traverse this rejection.

Kohrs discloses a spinal implant 400 having four linear thread segments 401-404 that are spaced apart by supports (e.g. 405, 408). As a basis for this rejection, the Examiner asserts that Kohr teaches: "a plurality of columns [ ] arranged in two rows "along" a midline of said bearing surfaces." Applicants respectfully note that none of claims 63-72 recite the language for which the Examiner asserts as the basis for this rejection.

Applicants therefore respectfully submit that claims 63-72 patentable.

II. The Examiner rejected claims 61-72 under 35 U.S.C. §102(b) as being anticipated by Knothe (WO 97/15247). Applicants respectfully traverse this rejection, however, Applicants have amended claim 61 to advance this application to allowance. Applicants reserve the right to pursue the original subject matter via a continuing application.

A. Claims 61 and 62

Claim 61 recites an implant having an implant body including first and second load bearing surfaces and a central support member. The central support member is configured to provide rigid support of the first and second load bearing surfaces.

Knothe does not disclose a central support member configured to provide rigid support of load bearing surfaces. Rather, Knothe discloses a central member 10 that permits upper and lower bone-contact faces 3, 4 to compress elastically towards an inner chamber 6 of the implant. (See abstract.) The central member 10 permits elastic compress, not rigid support of the bone-contact faces 3, 4. At least for this reason, Applicants respectfully submit that claims 61 and 62 are patentable.

B. Claims 63-72

None of claims 63-72 recite the language for which the Examiner uses as the basis for this rejection. Applicants accordingly assume that the rejection of claims 61-72 is a typographical error and should have read claims 61-62. If this assumption is incorrect, Applicants respectfully request further clarification of the rejection, as applied to claim 63-72, in order to address the Examiner's concerns.

III. The Examiner rejected claims 61-72 under 35 U.S.C. §102(e) as being anticipated by Hochshuler et al. (U.S. Patent No. 6,045,579). Applicants respectfully traverse this rejection, but have amended claim 61 to advance this application to allowance.

Hochshuler discloses a fusion device 10. The device 10 includes struts 30, 32 positioned between a pair of engaging plates 12, 14. The struts (e.g. 30) include an upper member 72 and a lower member 74. A hinge pin 70 is provided to allow the upper member 72 of the strut 30 to pivot with respect to the lower member 74. In this manner, the struts may be pivoted as shown in FIG. 9 such that the dovetail ends 50 of the struts are properly aligned with slots of the engaging plates 12, 14. Column 7, lines 60-67.

A. Claims 61 and 62

Claim 61 recites an implant for intervertebral fusion between opposing vertebrae. The implant includes an implant body having first and second load bearing surfaces. The implant body further includes a central support member configured to provide rigid support of the first and second load bearing surfaces.

The Examiner has characterized the strut 30 as the entire implant. Applicants respectfully submit that Hochshuler does not disclose, teach, or suggest that the strut 30 is configured as an implant for intervertebral fusion between opposing vertebrae. In fact, if the strut 30 were positioned between opposing vertebrae, spinal column forces acting upon the strut 30 would likely cause the strut to pivot and collapse, resulting in significant damage and pain to the patient. Hochshuler teaches that the strut 30 is used in conjunction with another strut 32 and the engaging plates 12, 14 to lock the strut 30 in a particular configuration. It is respectfully submitted that characterizing the strut 30 as an entire implant is improper.

Nonetheless, claim 61 recites that the central support member is configured to provide rigid support of the first and second load bearing surfaces. The central member of the strut 30 is not configured to provide rigid support of the dovetail ends 50. Rather, the central member includes a hinge pin 70 so that the ends 50 of the strut can pivot relative to one another. The hinge pin 70 does not provide rigid support of the dovetail ends 50, as required by claim 61.

At least for these reasons, Applicants respectfully submit that claims 61 and 62 are patentable.

B. Claims 63-67

Claim 63 recites an implant for intervertebral fusion between opposing vertebrae. The implant includes an implant body having a central support member and first and second traverse members positioned at ends of the central support member. The central support member is configured to maintain a spatial relation between the first and second traverse members.

The Examiner has characterized the strut 30 as the entire implant. For the reasons previously discussed, Applicants submit that the strut 30 cannot be properly characterized as an entire implant.

Even so, claim 63 recites that the central support member is configured to maintain the spatial relation between the first and second traverse members. The strut 30 is not configured to maintain the spatial relation of the dovetail ends 50 of the strut. Rather, the strut 30 includes a hinge pin 70 so that the ends 50 of the strut can pivot relative to one another. The hinge pin 70 does not maintain the spatial relation between the dovetail ends 50, as required by claim 63.

At least for these reasons, Applicants respectfully submit that claims 63-67 are patentable.

C. Claims 68-71

Claim 68 recites an implant for intervertebral fusion between opposing vertebrae. The implant includes an implant body having a central support member and first and second traverse members.

The Examiner has characterized the strut 30 as the entire implant. Applicants respectfully submit that Hochshuler does not disclose, teach, or suggest that the strut 30 is configured as an implant for intervertebral fusion between opposing vertebrae. In fact, if the strut 30 were positioned between opposing vertebrae, spinal column forces acting upon the strut 30 would likely cause the strut to pivot and collapse, resulting in significant damage and pain to the patient. Hochshuler teaches that the strut 30 is used in conjunction with another strut 32 and the engaging plates 12, 14 to lock the strut 30 in a particular configuration. It is respectfully submitted that characterizing the strut 30 as an entire implant is improper.

At least for this reason, Applicants respectfully submit that claims 68-71 are patentable.

D. Claim 72

Claim 72 recites an implant body having a support member and first and second traverse members. The support member is configured to provide rigid support of the first and second traverse members of the implant body.

At least for similar reasons as discussed with regards to claim 61, Applicants respectfully submit that claim 72 is patentable.

**New claims 73-76**

Each of new claims 73-76 depends upon claim 61, 63, 68 and 72 respectively. At least for the reasons as discussed with regards to claim 61, 63, 68, and 72, Applicants submit that claims 73-76 are patentable.

**Allowable Subject Matter**

The Examiner indicated that claims 1, 36-47, 49-50 and 53-60 would be allowed upon the submission of a proper terminal disclaimer. Applicants have herewith submitted a terminal disclaimer signed by an attorney of record. Applicants respectfully submit that the application is now in condition for allowance.

**SUMMARY**

It is respectfully submitted that each of the presently pending claims (claims 1, 36-47, 49, 50 and 53-76) is in condition for allowance and notification to that effect is requested. The Examiner is invited to contact Applicants' representative at the below-listed telephone number if it is believed that prosecution of this application may be assisted thereby.

Although certain arguments regarding patentability are set forth herein, there may be other arguments and reasons why the claimed invention is patentably distinct. Applicants reserve the right to raise these arguments in the future.



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Respectfully submitted,

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A handwritten signature in dark ink, appearing to read 'Karen A. Fitzsimmons', written over a horizontal line.

Karen A. Fitzsimmons

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KAF:cjm